

ditions than do the surfaces. Where boards are split badly on the ends, it means that much more must be trimmed away at the cutoff saw, with considerable lumber loss.

But while many defects are inherent in the lumber, there are undoubtedly many more which arise from the use of antiquated or unsuitable machinery such as old cutoff and rip saws which cut and rip out of square. Also, old planers and stickers with inadequate chipbreakers and poor feedworks, in which stock is unduly torn, or in which it stalls and accumulates roll gouges and cylinder marks. Other offenders are old bandsaws with worn guides, in which the blades cannot be held properly to the cut. All of these might be blamed and many more. The most satisfactory answer will come from a study of both lumber and machinery.

Steel Square Pocket Book

The sixth edition—revised and enlarged—of the "Steel Square Pocket Book" is announced by the Scientific Book Corp., 15 E. 26th St., New York, N. Y. This work is designed to offer carpenters a quick reference for solving many of their every-day problems by use of the steel square.

This book shows the best practical methods of using the square in laying out all kinds of carpentry work, including common, hip, or valley rafters. Simple instructions are also given for obtaining the cuts for braces, stairs, etc., as well as for describing various mathematical figures.

The "Steel Square Pocket Book," by Dwight L. Stoddard, has a handy 4 by 6 inch page size and a sturdy flexible binding. Copies may be obtained at only \$1.00 postpaid either from the publishers or from Hitchcock Publishing Co., 508 S. Dearborn St., Chicago, Ill.

Unit Heater Catalog

Because the heavy demands of National Defense are imposing a terrific burden on operating equipment, the quality construction of Ilg Unit Heaters is featured in a new 36-page catalog No. 141, just issued by Ilg Electric Ventilating Co., Chicago.

Around the catalog is a bright yellow band headed "Check up for the Speed Up," leading the reader into a "Check-Chart." On the back of the band, the National Defense story is further developed under the heading "Sissy Heaters Can't Take 3 Shifts a Day" and warns prospects not to risk break-downs during the national emergency.

Inside the catalog is a colorful presentation of the advantages of unit heaters over radiators and steam coils for heating the "vital zones" where people work, shop and play.

Helpful engineering data, including tables, illustrations pointing out the proper location of units in various types of buildings, piping diagrams, etc. fill the remaining pages.

What's New in the Industry

New Drive Steps-Up Plywood Production

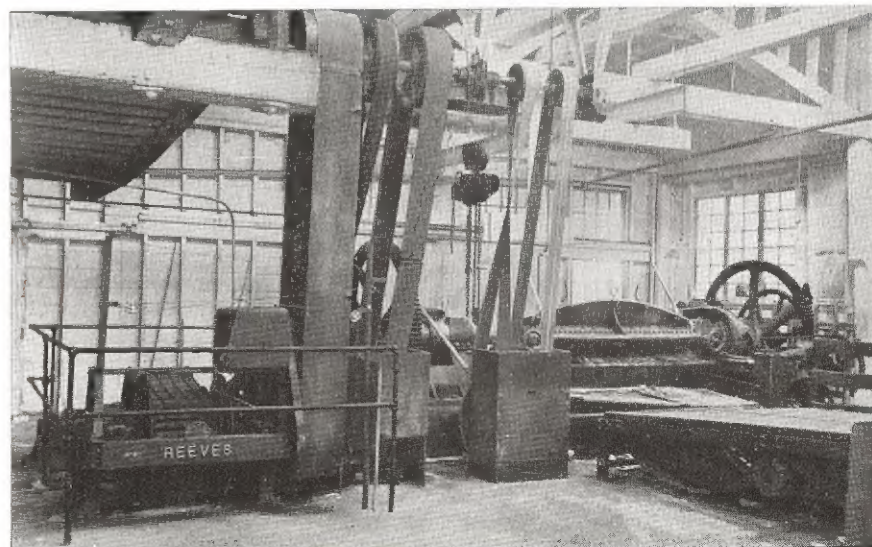
By Francis A. Westbrook, M. E.

A Michigan plywood manufacturer has applied a new transmission to a veneer lathe by means of which production is reported to have been increased some 78%, eliminating an extra shift. The object of the new drive was to obtain a substantially constant speed of the lathe for logs of varying diameters since the diameter of a given log decreases as it is turned down. It is an application which can doubtless be made in many other plants and its advantages, and how it was done in this instance, will be obvious from this brief description.

This lathe was driven, formerly, from a lineshaft with two belts and two clutches to provide two speeds, the slow speed being used for large diameters and the higher speed for

smaller diameters of logs. Of course, the peripheral speed decreased greatly as each log was turned down so that much less veneer was cut at the end than at the beginning of a run. For instance, the speed would be about 104 ft. per minute for a 20" diameter log and only about 34 ft. at 6½" diameter, the average being about 73 ft. per minute.

With the new set-up, the average was increased to about 130 ft. per minute. The arrangement is shown in the photograph. It consists of a variable speed transmission with hydraulic automatic control. One belt and one clutch from the old set-up were kept. The belt from the lineshaft drives to the constant speed shaft of the variable speed transmission. The variable



CLAMPS, INSTANTLY ADJUSTED INSTANTLY RELEASED

